

Patent claims

1. A working tool for an earth-moving machine, in particular a digger, having a digging device (10) embodied as a scoop or bucket which is arranged so as to be pivotable on an arm of the earth-moving machine and delimits a receiving space (24) for the material to be excavated, and having an add-on device (12) which is arranged on the digging device (10) and can be detached from the arm as a modular unit with said digging device, which add-on device (12) has an auxiliary tool (14, 16, 17) which can be pivoted relative to the loading opening (43) of the receiving space (24) by means of a pivoting drive (36), **characterized** in that the pivoting drive (36) has a pivoting shaft (42), which is arranged above the loading opening (43) and extends over more than half of the width thereof, for a limited pivoting movement, and in that the auxiliary tool (14, 16, 17) can be fixed to the pivoting shaft (42) by connecting means (50) so as to be exchangeable and/or moveable in terms of position.

2. The working tool as claimed in claim 1, **characterized** in that the pivoting shaft (42) runs parallel to and at a distance from the arm pin provided on the arm for a pivoting movement of the digging device (10).

3. The working tool as claimed in claim 1 or 2, **characterized** in that the pivoting shaft (42) preferably extends in a linearly continuous fashion over the entire

width of the loading opening (43).

4. The working tool as claimed in one of claims 1 to 3, **characterized** in that the pivoting shaft (42) is axially and/or radially supported on mounting points (48) in the region of the lateral delimitations (18) of the loading opening (43).

5. The working tool as claimed in one of claims 1 to 3, **characterized** in that the pivoting shaft (42) is mounted in mounting brackets on the upper delimiting wall (20) of the receiving space (24).

6. The working tool as claimed in one of claims 1 to 5, **characterized** in that the pivoting shaft (42) has, as a rotary element, an internally mounted tube (44) or a rod which is mounted by means of its casing.

7. The working tool as claimed in one of claims 1 to 6, **characterized** in that the connecting means (50) are arranged at connecting points which are distributed discretely or are continuous along the pivoting shaft (42).

8. The working tool as claimed in one of claims 1 to 7, **characterized** in that the pivoting shaft (42) in particular has multi-sided or polygonal profiled elements as connecting means (50) for a rotationally fixed, positively locking connection to the auxiliary tool (14, 16, 17).

9. The working tool as claimed in one of claims 1 to 8, **characterized** in that the connecting means (50) are designed for the auxiliary tool (14, 16, 17) to be suspended on,

plugged onto and/or screwed onto the pivoting shaft (42).

10. The working tool as claimed in one of claims 1 to 9, **characterized** in that the connecting means (50) comprise a laterally protruding plug-in spigot on the pivoting shaft (42) and a receiving shoe which is arranged on the auxiliary tool (14, 16, 17), and can be placed onto the plug-in spigot and can be fixed by means of a securing element.

11. The working tool as claimed in one of claims 1 to 10, **characterized** in that the pivoting shaft (42) is composed linearly of a plurality of rotationally fixedly connected sections.

12. The working tool as claimed in one of claims 1 to 11, **characterized** in that the pivoting drive (36) is preferably arranged eccentrically on an upper delimiting wall (20) of the receiving space (24).

13. The working tool as claimed in one of claims 1 to 12, **characterized** in that the pivoting drive is formed by a hydraulic lifting cylinder (36) which is coupled to the pivoting shaft.

14. The working tool as claimed in one of claims 1 to 13, **characterized** in that the optional auxiliary tool (14, 16, 17) is formed by at least one gripping finger (14) or a flap part (16), in particular a sludge flap or a sorting sieve.

15. The working tool as claimed in one of claims 1 to 14, **characterized** in that the optional auxiliary tool (14, 16, 17) is formed by a cleaning tool which can be pivoted into

the digging device (10) in order to clean the receiving space (24).

16. The working tool as claimed in claim 15, **characterized** in that the cleaning device comprises two scrapers (76) which can be guided along so as to scrape the inside of the side walls (18) of the digging device (10), and have a curved cutting edge (78).

17. The working tool as claimed in one of claims 1 to 16, **characterized** in that the coupling means (30, 32) provided for connecting the digging device (10) to the arm protrude freely from the pivoting shaft (42) on the digging device (10).

18. The working tool as claimed in one of claims 1 to 17, **characterized** in that the upper delimiting wall (20) of the receiving space (24) is reinforced by a stiffening element (58).